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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,462	12/04/2003	Richard M. Ehrlich	PANAP-1123US1	6266

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EXAMINER	
BUTLER, DENNIS	

ART UNIT	PAPER NUMBER
2115	

DATE MAILED: 05/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/727,462	EHRLICH, RICHARD M.	
	Examiner	Art Unit	
	Dennis M. Butler	2115	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. This action is in response to the application filed on December 4, 2003. Claims 1-9 are pending.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 4, the phrase "the location of the critical data on the hard drive" in line 3 lacks proper antecedent basis because there is no preceding recitation of the critical data being on a hard drive and no preceding recitation of a location of the critical data on the hard drive.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Rothberg et al., U. S. Patent 6,968,450.

Per claims 1-3:

A) Rothberg et al teach the following claimed items:

1. detecting a critical event/power-on of a hard drive with power on of figures 1B and 2, at column 4, lines 9-22 and at column 5, lines 3-13;

2. retrieving critical data associated with host boot-up with initializing the cache data structure and/or storing boot data in NVSM cache in elements 38 and 58 of figure 2, at column 5, lines 5-6 and 30-32 and at column 6, lines 7-20;

3. receiving a data request from a host device (host computer) with element 42 of figure 2 and at column 5, lines 16-23;

4. providing the critical data in response to the request with element 48 of figure 2 and at column 5, lines 16-23 and at column 8, lines 8-21.

Per claims 4-7:

Rothberg describes accessing critical data location information from FLASH with accessing the cache data structure of figure 3B and at column 6, lines 7-13. Rothberg describes retrieving the critical data as described above in connection to claim 1. Rothberg describes that the cache data structure stores the addresses identifying the boot data blocks and describes that the boot data in the NVSM cache can be immediately sent to the host computer with figure 3B and at column 8, lines 11-14. Therefore, the boot data in the NVSM cache has been retrieved when the cache data structure has been initialized. In addition,

Rothberg describes that the NVSM cache is located on the hard drive at column 3, line 63 – column 4, line 3. Therefore, the location information is for a location on the hard drive. Rothberg describes identifying critical data likely to be requested with figures 2 and 3B and at column 6, lines 7-29. Rothberg describes recording past data requests associated with past occurrences of the critical event and identifying the critical data from the past data requests with figure 3B and at column 6, lines 7-29. Rothberg describes identifying the critical data to be the data requested in the most recent past data request with figures 3A and 3B and at column 5, line 55 - column 6, line 29.

7. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothberg et al., U. S. Patent 6,968,450 in view of DeWhitt et al., U. S. Patent Application Publication 2004/0064647.

Per claim 8:

The claim differs from Rothberg in that Rothberg fails to explicitly teach identifying critical data to be data most often requested in the past data requests as claimed. However, Rothberg describes providing a cache memory for storing data likely to be requested as described above. DeWhitt teaches that it is known to identify critical data to be data most often requested in the past data requests at paragraph 54. It would have been obvious to one having ordinary skill in the art at the time the invention was made to identify critical data to be data most often requested in the past data requests, as taught by DeWhitt, in order to accurately predict what data will be requested. One of ordinary skill in the art

would have been motivated to combine Rothberg and DeWhitt because of DeWhitt's suggestion of using a predictive cache that looks at a users behavior over an extended period to determine frequently required data. It would have been obvious for one of ordinary skill in the art to combine Rothberg and DeWhitt because they are both directed to the problem of improving the performance of hard drives by using a cache memory to reduce the start-up time of a computer by caching boot data.

Per claim 9:

DeWhitt describes identifying critical data specified in a vendor unique command (interface command) with the user selected data identifier via an interface at the bottom of paragraph 55.

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1-9 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of copending Application No. 10/727,721. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are directed to substantially the same invention. The claims of the present application do not recite the circuitry of the hard drive. However, it is well known that hard drives include a platter, head and a controller.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis M. Butler whose telephone number is 571-272-3663. The fax number for this unit is 571-273-8300 .

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dennis M. Butler
Primary Examiner
Art Unit 2115